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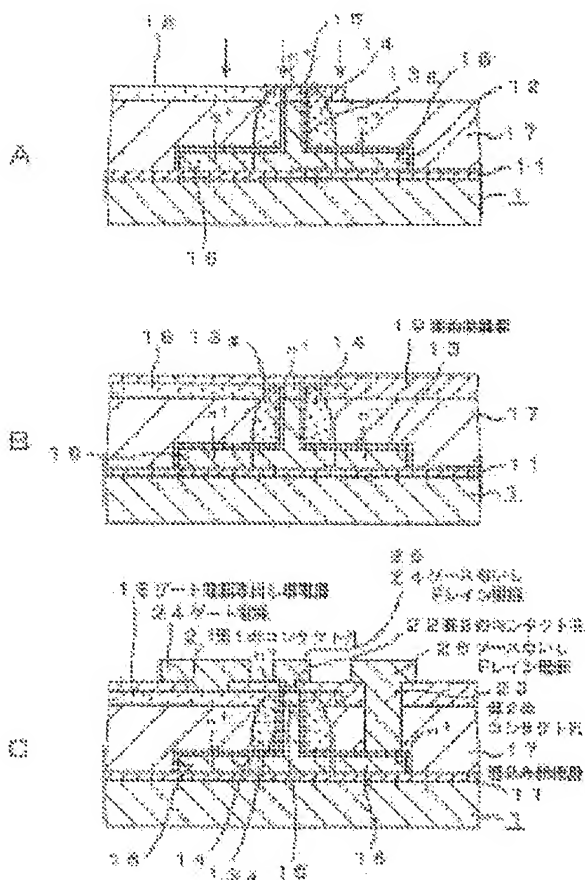
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## SEMICONDUCTOR DEVICE AND MANUFACTURE THEREOF

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## Abstract of JP 2000068516 (A)

PROBLEM TO BE SOLVED: To enhance the cutoff frequency by obtaining a large channel width with a small occupying area. SOLUTION: A columnar semiconductor 2 is formed on a semiconductor 10. A gate insulating layer 13g is formed on the entire surface. A gate conductor layer 14 is formed at the outer surface thereof. Furthermore, an embedding insulating layer 17 which embeds the polar semiconductor is formed. On the embedding insulating layer 17, a gate-electrode take-out conducting layer 18 connected to the gate conductor layer 14 is formed. The gate-electrode take-out conducting layer is embedded, and a surface insulating layer 19 is formed on the embedding layer 17. A contact hole is formed. A source or drain electrode is brought into contact in the source or drain region at the upper end and the base part of the columnar semiconductor 2 over the gate electrode take-out conducting layer 18. A channel is formed at the surrounding surface of the columnar semiconductor 2. Thus, the wide channel is formed, and reduction in conductance and improvement in cutoff frequency are improved.



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